

What is claimed is:

1. A method of dynamically creating a communication path between first and second storage devices, comprising:

creating a connection to a source volume on the first storage device and indicating

5 that the source volume is not ready to transmit data on the communication path;

after successfully creating the connection to the source volume, creating a

connection to a destination volume on the second storage device and initially indicating

that portions of one of: the destination volume and the source volume do not contain

valid copies of data, wherein the destination volume accepts data from the source

10 volume; and

after successfully creating the connections to the source and destination volumes,

indicating that the source volume is ready to transmit data on the communication path.

2. A method, according to claim 1, further comprising:

creating at least one of: the source volume and the destination volume.

15 3. A method, according to claim 1, wherein creating the connection to the source volume includes modifying a table containing configuration information for the first storage device.

4. A method, according to claim 3, wherein creating the connection to the destination volume includes modifying a table containing configuration information for the second

20 storage device.

5. A method, according to claim 1, further comprising:

following unsuccessfully creating a connection to the destination volume,
destroying the connection to the source volume.

6. A method, according to claim 5, further comprising:

5 returning an error indication.

7. A method, according to claim 1, wherein portions of the destination volume are
initially indicated as not containing valid data.

8. A method, according to claim 7, further comprising:

10 after indicating that the source volume is ready to transmit data on the
communication path, initiating a background copy operation to copy data from the source
volume to the destination volume.

9. A method, according to claim 1, wherein portions of the source volume are initially
indicated as not containing valid data.

10. A method, according to claim 9, further comprising:

15 after indicating that the source volume is ready to transmit data on the
communication path, initiating a background copy operation to copy data from the
destination volume to the source volume.

11. A method, according to claim 10, further comprising:

the host performing an I/O operation on a particular portion of the source volume.

12. A method, according to claim 11, further comprising:

in response to the particular portion being indicated as containing invalid data,

5 copying data corresponding to the particular portion from the destination volume to the source volume prior to completing the I/O operation.

13. A method of dynamically creating a communication path between first and second storage devices, comprising:

creating a connection to a destination volume on the first storage device;

10 after successfully creating the connection to the destination volume, creating a connection to a source volume on the second storage device and indicating that the source volume is not ready to transmit data on the communication path and initially indicating that portions of one of: the destination volume and the source volume do not contain valid copies of data, wherein the destination volume accepts data from the source
15 volume; and

after successfully creating the connections to the source and destination volumes, indicating that the source volume is ready to transmit data on the communication path.

14. A method, according to claim 13, further comprising:

creating at least one of: the source volume and the destination volume.

15. A method, according to claim 13, wherein creating the connection to destination volume includes modifying a table containing configuration information for the first storage device.

16. A method, according to claim 15, wherein creating the connection to the source
5 volume includes modifying a table containing configuration information for the second storage device.

17. A method, according to claim 13, further comprising:
following unsuccessfully creating a connection to the source volume, destroying
the connection to the destination volume.

10 18. A method, according to claim 17, further comprising:
returning an error indication.

19. A method, according to claim 13, wherein portions of the destination volume are initially indicated as not containing valid data.

20. A method, according to claim 19, further comprising:
15 after indicating that the source volume is ready to transmit data on the communication path, initiating a background copy operation to copy data from the source volume to the destination volume.

21. A method, according to claim 13, wherein portions of the source volume are initially indicated as not containing valid data.

22. A method, according to claim 21, further comprising:

5 after indicating that the source volume is ready to transmit data on the communication path, initiating a background copy operation to copy data from the destination volume to the source volume.

23. A method, according to claim 22, further comprising:

 the host performing an I/O operation on a particular portion of the source volume.

24. A method, according to claim 23, further comprising:

10 in response to the particular portion being indicated as containing invalid data, copying data corresponding to the particular portion from the destination volume to the source volume prior to completing the I/O operation.

25. A computer program product that creates a communication path between first and second storage devices, comprising:

executable code that creates a connection to a source volume on the first storage device and indicates that the source volume is not ready to transmit data on the communication path;

executable code that creates a connection to a destination volume on the second storage device and initially indicates that portions of one of: the destination volume and the source volume do not contain valid copies of data after successfully creating the connection to the source volume, , wherein the destination volume accepts data from the source volume; and

executable code that indicates that the source volume is ready to transmit data on the communication path after successfully creating the connections to the source and destination volumes.

26. A computer program product, according to claim 25, further comprising:

executable code that creates at least one of: the source volume and the destination volume.

27. A computer program product, according to claim 25, where executable code that creates the connection to the source volume modifies a table containing configuration information for the first storage device.

28. A computer program product, according to claim 27, wherein executable code that creates the connection to the destination volume modifies a table containing configuration information for the second storage device.

29. A computer program product, according to claim 25, further comprising:

5 executable code that destroys the connection to the source volume following unsuccessfully creating a connection to the destination volume.

30. A computer program product, according to claim 25, further comprising:

 executable code that returns an error indication.

31. A computer program product, according to claim 25, further comprising:

10 executable code that causes portions of the source volume to be initially indicated as not containing valid data.

32. A computer program product, according to claim 31, further comprising:

 executable code that initiates a background copy operation to copy data from the destination volume to the source volume after indicating that the source volume is ready
15 to transmit data on the communication path.

33. A computer program product, according to claim 32, further comprising:

 executable code that copies data corresponding to a requested portion from the destination volume to the source volume prior to completing an I/O operation in response to the requested portion being indicated as containing invalid data.

34. A computer program product that dynamically creates a communication path between first and second storage devices, comprising:

executable code that creates a connection to a destination volume on the first storage device;

5 executable code that creates a connection to a source volume on the second storage device and indicates that the source volume is not ready to transmit data on the communication path and initially indicates that portions of one of: the destination volume and the source volume do not contain valid copies of data after successfully creating the connection to the destination volume, wherein the destination volume accepts data from
10 the source volume; and

executable code that indicates that the source volume is ready to transmit data on the communication path after successfully creating the connections to the source and destination volumes.

35. A computer program product, according to claim 34, further comprising:

15 executable code that creates at least one of: the source volume and the destination volume.

36. A computer program product, according to claim 34, where executable code that creates the connection to the source volume modifies a table containing configuration information for the first storage device.

37. A computer program product, according to claim 34, wherein executable code that creates the connection to the destination volume modifies a table containing configuration information for the second storage device.

38. A computer program product, according to claim 34, further comprising:

5 executable code that destroys the connection to the destination volume following unsuccessfully creating a connection to the source volume.

39. A computer program product, according to claim 38, further comprising:

 executable code that returns an error indication.